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EXAMINER

STACE, BRENT S

ART UNIT PAPER NUMBER

2161

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/667,712

Applicant(s)

MAEDA ET AL.

Examiner

Brent S. Stace

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☒ Claim(s) 32-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20060308.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Remarks***

1. Claims 1-44 have been examined. Claims 1-44 have been rejected. This document is the first Office action on the merits.

### ***Information Disclosure Statement***

2. The information disclosure statement is being considered by the examiner.

### ***Specification***

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Drawings***

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 1, detail 10. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet

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should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. Since the lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors, Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings. For example, the drawings should be carefully checked to ensure that all reference numerals are described in the specification, that no one reference numeral describes two separate drawing elements, or that the specification contains no reference to numerals not in the drawings.

### ***Claim Objections***

6. Claims 32-34 objected to because of the following informalities:

- a. Claims 32-34 are not grouped together with the claim or claims to which they refer to the extent practicable. See MPEP § 608.01(m) and 37 C.F.R. 1.75 (g).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

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7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claims 1-44 recites "and/or," which renders the claim indefinite since it is unclear what the claim is claiming (e.g. "and" and "or," just "and," or just "or"). The claims either directly recite this limitation or recite it from a dependency from a prior Claim.

10. Claim 33 recites the limitation "node stream generation substep" and "the node stream generation step" in lines 1-2 and 3, respectfully. There is insufficient antecedent basis for these limitations in the claim.

### ***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 13-15, and 35-37 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0236903 (Piotrowski).

13. **Claim 13** can be mapped to Piotrowski as follows: "A tree-structured document receiving apparatus which receives a signal formed by converting on the basis of a predetermined network protocol a node stream [Piotrowski, paragraph [0022] with Piotrowski, paragraph [0015] with Piotrowski, Fig. 1] formed in such a manner that a node priority is set with respect to each of nodes [Piotrowski, paragraph [0019] with Piotrowski, paragraph [0017] with Piotrowski, paragraph [0022]] of a tree-structured document on the basis of the importance of an information portion to be presented from the node to a receiving-side user [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0007]-[0008] with Piotrowski, paragraph [0025]] while satisfying two conditions: a first condition that the node priority of the node is equal to or lower than that of a node which is an ancestor of that node, [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] and a second condition that if a plurality of nodes of the same priority exist, the nodes necessarily constitute one subtree; [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] and nodes and/or subtrees are arranged in a sequence on the basis of the node priorities, [Piotrowski, paragraphs [0007]-[0008]] said tree-structured document receiving apparatus having:

- receiving means of restoring the node stream from the signal received by the predetermined network protocol; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] extraction means of extracting the nodes and/or subtrees from the node stream restored by said receiving means according to the sequence of arrangement in the node stream; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]]

- reconstruction means of adding the nodes and/or subtree in the extraction order to the tree-structured document under reconstruction; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and
- display means of displaying the tree-structured document in the current reconstructed state" [Piotrowski, paragraph [0025] with Piotrowski, paragraph [0009]].

14. **Claim 14** can be mapped to Piotrowski as follows: "The tree-structured document receiving apparatus according to claim 13, wherein, in the node stream restored by said receiving means, descendant substitute display information for substitute display on said display means for descendant nodes with respect to a node and/or a subtree existing as a parent of the descendant node is added immediately after the node and/or subtree existing as a parent of the descendant node; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]]

- said extraction means extracts the nodes and/or subtrees and the descendant substitute display information from the node stream restored by said receiving means according to the sequence of arrangement in the node stream; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and
- said reconstruction means adds a substitute structure portion relating to the descendant substitute display information to the tree structure under reconstruction in place of the descendant node relating to the descendant substitute display information when said extraction means extracts the

descendant substitute display information" [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0009]].

15. **Claim 15** can be mapped to Piotrowski as follows: "The tree-structured document receiving apparatus according to claim 14, wherein said reconstruction means immediately replaces the substitute tree-structured portion relating to the descendant substitute display information in the tree structure under reconstruction with the descendant node when said extraction means extracts the descendant node while substitute display for the descendant node according to the descendant substitute display information is being performed" [Piotrowski, paragraph [0009] with Piotrowski, paragraph [0025]].

16. **Claims 35-37** encompass substantially the same scope of the invention as that of Claims 13-15, respectfully, in addition to a method and some steps for performing the system means of Claims 13-15, respectfully. Therefore, Claims 35-37 are rejected for the same reasons as stated above with respect to Claims 13-15, respectfully.

### ***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of



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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. Claims 1-4, 10-12, 23-26, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0236903 (Piotrowski) in view of U.S. Patent No. 5,899,995 (Miller et al.).

20. For **Claim 1**, Piotrowski teaches: "A tree-structured document transmitting and receiving system having a tree-structured document transmitting apparatus and a tree-structured document receiving apparatus, [Piotrowski, Fig. 1 with Piotrowski, paragraph [0022]] said tree-structured document transmitting apparatus having:

- ...of storing a plurality of tree-structured documents; [Piotrowski, paragraphs [0022]-[0023]]
- node priority presentation means of presenting a node priority [Piotrowski, paragraph [0019]] which is set with respect to each of nodes [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0022]] of a tree-structured document on the basis of the importance of an information portion to be presented from the node to a receiving-side user [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0007]-[0008] with Piotrowski, paragraph [0025]]

while satisfying two conditions: a first condition that the node priority of the node is equal to or lower than that of a node which is an ancestor of that node, [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] and a second condition that if a plurality of nodes of the same priority exist, the nodes necessarily constitute one subtree; [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]]

- node stream generation means [Piotrowski, paragraph [0022]] of reading out a tree-structured document to be transmitted from the tree-structured document storage means and generating a node stream in which nodes and/or subtrees are arranged in a sequence on the basis of node priorities presented by said node priority presentation means; [Piotrowski, paragraphs [0007]-[0008]] and
- transmitting means of converting said node stream into a signal based on a predetermined network protocol and transmitting the signal, [Piotrowski, paragraph [0015] with Piotrowski, Fig. 1] said tree-structured document receiving apparatus having:
  - receiving means of restoring the node stream from the signal received by said predetermined network protocol from said transmitting means; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]]
  - extraction means of extracting the nodes and/or subtrees from the node stream restored by said receiving means according to the sequence of arrangement in the node stream; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]]

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- reconstruction means of adding the nodes and/or subtree in the extraction order to the tree-structured document under reconstruction; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and
- display means of displaying the tree-structured document in the current reconstructed state" [Piotrowski, paragraph [0025] with Piotrowski, paragraph [0009]].

Piotrowski discloses the above limitations but does not expressly teach:

- "...tree-structured document storage means."

With respect to Claim 1, an analogous art, Miller, teaches:

- "...tree-structured document storage means" [Miller, col. 6, lines 60-67].

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Miller with Piotrowski because both inventions are directed towards storing files.

Miller's invention would have been expected to successfully work well with Piotrowski's invention because both inventions use storage areas. Piotrowski discloses a method and apparatus for structured streaming of an XML document comprising storage devices, however Piotrowski does not expressly disclose that the storage devices are tree-structured. Miller discloses a method and apparatus for automatically organizing information comprising storage areas and a storage manager that files documents into appropriate folders and/or storage areas.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the folders/files from Miller and install it into the invention of Piotrowski,

thereby offering the obvious advantage of having an organized way of storing items on the storage device.

21. **Claim 2** can be mapped to Piotrowski (as modified by Miller) as follows: "The tree-structured document transmitting and receiving system according to claim 1,

wherein said tree-structured document transmitting apparatus further has:

- descendant substitute display information storage means of storing descendant substitute display information for substitute display on said display means of said tree-structured document receiving apparatus for descendant nodes with respect to a node and/or a subtree existing as a parent of the descendant node; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]] and
- descendant substitute display information addition means of making the node stream generation means generate as said node stream a stream in which the descendant substitute display information read out from said descendant substitute display information storage means is added immediately after the node and/or subtree existing as a parent of the descendant node, [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]] and
- wherein, in said tree-structured document receiving apparatus, said extraction means extracts the nodes and/or subtrees and the descendant substitute display information from the node stream restored by said receiving means according to the sequence of arrangement in the node stream; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and

- said reconstruction means adds a substitute structure portion relating to the descendant substitute display information to the tree structure under reconstruction in place of the descendant node relating to the descendant substitute display information when said extraction means extracts the descendant substitute display information" [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0009]].

22. **Claim 3** can be mapped to Piotrowski (as modified by Miller) as follows: "The tree-structured document transmitting and receiving system according to claim 2, wherein, in said tree-structured document receiving apparatus, said reconstruction means immediately replaces the substitute tree-structured portion relating to the descendant substitute display information in the tree structure under reconstruction with the descendant node when said extraction means extracts the descendant node while substitute display for the descendant node according to the descendant substitute display information is being performed" [Piotrowski, paragraph [0009] with Piotrowski, paragraph [0025]].

23. **Claim 4** can be mapped to Piotrowski (as modified by Miller) as follows: "The tree-structured document transmitting and receiving system according to claim 1, wherein said tree-structured document transmitting apparatus further has node priority setting means of determining the importance of an information portion to be presented from each node to the receiving-side user on the basis of a content of the node, an attribute of the node, a content of the document, an attribute of the document, the tree structure, a user instruction from a transmitting-side user, and/or a user instruction from

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the receiving-side user, and setting a node priority on the basis of the determination, [Piotrowski paragraph [0019]] and

- wherein, in said tree-structured document transmitting apparatus, said node priority presentation means presents the node priority set by said node priority setting means" [Piotrowski paragraph [0019]].

24. For **Claim 10**, Piotrowski teaches: "A tree-structured document transmitting apparatus [Piotrowski, Fig. 1 with Piotrowski, paragraph [0022]] having:

- ... of storing a plurality of tree-structured documents; [Piotrowski, paragraphs [0022]-[0023]]
- node priority presentation means of presenting a node priority [Piotrowski, paragraph [0019]] which is set with respect to each of nodes [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0022]] of a tree-structured document on the basis of the importance of an information portion to be presented from the node to a receiving-side user [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0007]-[0008] with Piotrowski, paragraph [0025]] while satisfying two conditions: a first condition that the node priority of the node is equal to or lower than that of a node which is an ancestor of that node, [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] and a second condition that if a plurality of nodes of the same priority exist, the nodes necessarily constitute one subtree; [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]]

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- node stream generation means [Piotrowski, paragraph [0022]] of reading out a tree-structured document to be transmitted from the tree-structured document storage means and generating a node stream in which nodes and/or subtrees are arranged in a sequence on the basis of node priorities presented by said node priority presentation means; [Piotrowski, paragraphs [0007]-[0008]] and
- transmitting means of converting said node stream into a signal based on a predetermined network protocol and transmitting the signal” [Piotrowski, paragraph [0015] with Piotrowski, Fig. 1].

Piotrowski discloses the above limitations but does not expressly teach:

- “...tree-structured document storage means.”

With respect to Claim 10, an analogous art, Miller, teaches:

- “...tree-structured document storage means” [Miller, col. 6, lines 60-67].

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Miller with Piotrowski because both inventions are directed towards storing files.

Miller’s invention would have been expected to successfully work well with Piotrowski’s invention because both inventions use storage areas. Piotrowski discloses a method and apparatus for structured streaming of an XML document comprising storage devices, however Piotrowski does not expressly disclose that the storage devices are tree-structured. Miller discloses a method and apparatus for automatically organizing information comprising storage areas and a storage manager that files documents into appropriate folders and/or storage areas.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the folders/files from Miller and install it into the invention of Piotrowski, thereby offering the obvious advantage of having an organized way of storing items on the storage device.

25. **Claim 11** can be mapped to Piotrowski (as modified by Miller) as follows: "The tree-structured document transmitting apparatus according to claim 10, further having:

- descendant substitute display information storage means of storing descendant substitute display information for substitute display on said display means of said tree-structured document receiving apparatus for descendant nodes with respect to a node and/or a subtree existing as a parent of the descendant node; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]] and
- descendant substitute display information addition means of making the node stream generation means generate as said node stream a stream in which the descendant substitute display information read out from said descendant substitute display information storage means is added immediately after the node and/or subtree existing as a parent of the descendant node" [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]].

26. **Claim 12** can be mapped to Piotrowski (as modified by Miller) as follows: "The tree-structured document transmitting apparatus according to claim 10, further having:

- node priority setting means of determining the importance of an information portion to be presented from each node to a receiving-side user on the basis of a content of the node, an attribute of the node, a content of the document, an



attribute of the document, the tree structure, a user instruction from a transmitting-side user, and/or a user instruction from the receiving-side user, and setting a node priority on the basis of the determination, [Piotrowski paragraph [0019]]

- wherein said node priority presentation means presents the node priority set by said node priority setting means" [Piotrowski paragraph [0019]].

27. **Claims 23-26 and 32-34** encompass substantially the same scope of the invention as that of Claims 1-4 and 10-12, respectfully, in addition to a method and some steps for performing the system means of Claims 1-4 and 10-12, respectfully. Therefore, Claims 23-26 and 32-34 are rejected for the same reasons as stated above with respect to Claims 1-4 and 10-12, respectfully.

28. Claims 5-9, 16-19, 27-31, and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0236903 (Piotrowski) in view of U.S. Patent No. 5,899,995 (Miller et al.) in view of U.S. Patent No. 5,790,937 (Gutle), further in view of U.S. Patent No. 5,907,841 (Sumita).

29. For **Claim 5**, Piotrowski teaches: "A tree-structured document transmitting and receiving system having a tree-structured document transmitting apparatus and a tree-structured document receiving apparatus, [Piotrowski, Fig. 1 with Piotrowski, paragraph [0022]] said tree-structured document transmitting apparatus having:

- ... of storing a plurality of tree-structured documents; [Piotrowski, paragraphs [0022]-[0023]]

- ... document-by-document encoding means [Piotrowski, paragraphs [0015]-[0017]]..., and each having node priority presentation means [Piotrowski, paragraph [0019]] and node stream generation means, [Piotrowski, paragraph [0022]] said node priority presentation means presenting a node priority which is set with respect to each of nodes [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0022]] of said assigned tree-structured document on the basis of the importance of an information portion to be presented from the node to a receiving-side user [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0007]-[0008] with Piotrowski, paragraph [0025]] while satisfying two conditions: a first condition that the node priority of the node is equal to or lower than that of a node which is an ancestor of that node, [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] and a second condition that if a plurality of nodes of the same priority exist, the nodes necessarily constitute one subtree, [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] said node stream generation means reading out a tree-structured document to be transmitted from the tree-structured document storage means and generating a node stream in which nodes and/or subtrees are arranged in a sequence on the basis of node priorities presented by said node priority presentation means; [Piotrowski, paragraphs [0007]-[0008]]
- ... stream generation means [Piotrowski, paragraph [0022]] of generating one multiplexed stream by multiplexing the node streams from said document-by-document encoding means, sequences in which the nodes and/or subtrees of the

tree-structured documents are arranged being placed in the multiplexed stream according to the inter-document priorities presented by said inter-document priority presentation means with respect to the tree-structured documents containing the nodes and/or subtrees; [Piotrowski, paragraphs [0007]-[0008]] and

- transmitting means of transmitting said multiplexed stream by converting said multiplexed stream on the basis of a predetermined network protocol, [Piotrowski, paragraph [0015] with Piotrowski, Fig. 1] said tree-structured document receiving apparatus having:
  - receiving means of restoring the multiplexed stream from the signal received by said predetermined network protocol from said transmitting means; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]]
  - ... document-by-document decoding means... [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]], and each including extraction means and reconstruction means, said extraction means extracting the nodes and/or subtrees from said processing-assigned node stream according to the sequence of arrangement in the node stream, said reconstruction means adding the nodes and/or subtree in the extraction order to the tree-structured document under reconstruction; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and
  - display means of displaying the tree-structured document under reconstruction in each document-by-document decoding means, the tree structure being displayed

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in the current reconstructed state at a corresponding position" [Piotrowski, paragraph [0025] with Piotrowski, paragraph [0009]].

Piotrowski discloses the above limitations but does not expressly teach:

- "...tree-structured document storage means
- ...a plurality of...each assigned processing of one tree-structured document in a plurality of tree-structured documents to be transmitted
- ...multiplexed
- ...inter-document priority presentation means of presenting inter-document priorities set as transmission priorities with respect to the plurality of tree-structured documents to be transmitted;
- ...demultiplexing means of demultiplexing the multiplexed stream into the plurality of node streams contained in the multiplexed stream;
- a plurality of ...each assigned processing of one node stream in the plurality of node streams demultiplexed by said demultiplexing means"

With respect to Claim 5, an analogous art, Miller, teaches:

- "...tree-structured document storage means" [Miller, col. 6, lines 60-67].

With respect to Claim 5, an analogous art, Gutle, teaches:

- "...multiplexed [Gutle, col. 2, lines 10-30]
- ...demultiplexing means of demultiplexing the multiplexed stream into the plurality of node streams contained in the multiplexed stream;" [Gutle, col. 2, lines 10-30].

With respect to Claim 5, an analogous art, Sumita, teaches:

- "...inter-document priority presentation means of presenting inter-document priorities set as transmission priorities with respect to the plurality of tree-structured documents to be transmitted" [Sumita, cols. 21-22, lines 65-6 with Piotrowski, paragraph [0019]].

With respect to Claim 5 case law teaches:

- "...a plurality of...each assigned processing of one tree-structured document in a plurality of tree-structured documents to be transmitted [*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)]
- "...a plurality of ...each assigned processing of one node stream in the plurality of node streams demultiplexed by said demultiplexing means" [*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)].

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Miller, Sumita and Gutle with Piotrowski because the inventions are directed towards storing and transmitting files.

Miller, Sumita and Gutle's inventions would have been expected to successfully work well with Piotrowski's invention because the inventions use storage areas and transmit files. Piotrowski discloses a method and apparatus for structured streaming of an XML document comprising storage devices, however Piotrowski does not expressly disclose that the storage devices are tree-structured, presenting inter-document priorities, and transferring using multiplexing/demultiplexing. Miller discloses a method and apparatus for automatically organizing information comprising storage areas and a storage manager that files documents into appropriate folders and/or storage areas.

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Sumita discloses a document detection system with improved document detection efficiency comprising displaying documents according to priority. Gutle discloses a method and apparatus for the distribution of multi-media documents comprising multiplexing and demultiplexing a stream of data.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the folders/files from Miller, the multiplexing/demultiplexing from Gutle, and the presenting inter-document priorities from Sumita and install it into the invention of Piotrowski, thereby offering the obvious advantage of having an organized way of storing items on the storage device, sending multiple things through a stream of data (increasing the speed), and displaying relevant documents first according to their priority.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Piotrowski such that Piotrowski has a plurality of document-by-document encoding and decoding means each assigned processing of one tree-structured document in a plurality of tree-structured documents to be transmitted since it has been held that a duplication of parts with function (*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)) is obvious. In this case it is obvious because it would increase the speed of the Piotrowski so Piotrowski's invention does more than one document at a time.

30. **Claim 6** can be mapped to Piotrowski (as modified by Miller, Sumita and Gutle) as follows: "The tree-structured document transmitting and receiving system according

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to claim 5, wherein, in said tree-structured document transmitting apparatus, said document-by-document encoding means further includes:

- descendant substitute display information storage means of storing descendant substitute display information for substitute display on said display means of said tree-structured document receiving apparatus for descendant nodes with respect to a node and/or a subtree existing as a parent of the descendant node; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]] and
- descendant substitute display information addition means of making the node stream generation means generate as said node stream a stream in which the descendant substitute display information read out from said descendant substitute display information storage means is added immediately after the node and/or subtree existing as a parent of the descendant node, [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]] and
- wherein, in each document-by-document decoding means of said tree-structured document receiving apparatus, said extraction means extracts the nodes and/or subtrees and the descendant substitute display information from the node stream restored by said receiving means according to the sequence of arrangement in the node stream; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and
- said reconstruction means adds a substitute structure portion relating to the descendant substitute display information to the tree structure under reconstruction in place of the descendant node relating to the descendant

substitute display information when said extraction means extracts the descendant substitute display information" [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0009]].

31. **Claim 7** can be mapped to Piotrowski (as modified by Miller, Sumita and Gutle) as follows: "The tree-structured document transmitting and receiving system according to claim 6, wherein, in each document-by-document decoding means of said tree-structured document receiving apparatus, said reconstruction means immediately replaces the substitute tree-structured portion relating to the descendant substitute display information in the tree structure under reconstruction with the descendant node when said extraction means extracts the descendant node while substitute display for the descendant node according to the descendant substitute display information is being performed" [Piotrowski, paragraph [0009] with Piotrowski, paragraph [0025]].

32. **Claim 8** can be mapped to Piotrowski (as modified by Miller, Sumita and Gutle) as follows: "The tree-structured document transmitting and receiving system according to claim 5,

- wherein the multiplexed stream generation means of said tree-structured document transmitting apparatus further has node priority setting means of determining the importance of an information portion to be presented from each node to the receiving-side user on the basis of a content of the node, an attribute of the node, a content of the document, an attribute of the document, the tree structure, and/or a user instruction, and setting a node priority on the basis of the determination, [Piotrowski paragraph [0019]] and



- wherein, in the multiplexed stream generation means of said tree-structured document transmitting apparatus, said node priority presentation means presents the node priority set by said node priority setting means" [Piotrowski paragraph [0019]].

33. **Claim 9** can be mapped to Piotrowski (as modified by Miller, Sumita and Gutle) as follows: "The tree-structured document transmitting and receiving system according to claim 5,

- wherein said tree-structured document transmitting apparatus further has inter-document priority setting means of setting inter-document priorities on the basis of the contents of the documents, the attributes of the documents, the degrees of relation with a search word relating to a search request from the receiving-side user, a user instruction from a transmitting-side user, and/or a user instruction from the receiving-side user, [Sumita, cols. 21-22, lines 65-6 with Piotrowski, paragraph [0019]] and
- wherein, in said tree-structured document transmitting apparatus, said inter-document priority presentation means presents the inter-document priorities set by said inter-document priority setting means" [Sumita, cols. 21-22, lines 65-6 with Piotrowski, paragraph [0019]].

34. For **Claim 16**, Piotrowski teaches: "A tree-structured document transmitting apparatus [Piotrowski, Fig. 1 with Piotrowski, paragraph [0022]] having:

- ...of storing a plurality of tree-structured documents; [Piotrowski, paragraphs [0022]-[0023]]

- ...document-by-document encoding means [Piotrowski, paragraphs [0015]-[0017]]..., and each having node priority presentation means [Piotrowski, paragraph [0019]] and node stream generation means, [Piotrowski, paragraph [0022]] said node priority presentation means presenting a node priority which is set with respect to each of nodes [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0022]] of said assigned tree-structured document on the basis of the importance of an information portion to be presented from the node to a receiving-side user [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0007]-[0008] with Piotrowski, paragraph [0025]] while satisfying two conditions: a first condition that the node priority of the node is equal to or lower than that of a node which is an ancestor of that node, [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] and a second condition that if a plurality of nodes of the same priority exist, the nodes necessarily constitute one subtree, [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] said node stream generation means reading out a tree-structured document to be transmitted from the tree-structured document storage means and generating a node stream in which nodes and/or subtrees are arranged in a sequence on the basis of node priorities presented by said node priority presentation means; [Piotrowski, paragraphs [0007]-[0008]]
- ...stream generation means [Piotrowski, paragraph [0022]] of generating one multiplexed stream by multiplexing the node streams from said document-by-document encoding means, sequences in which the nodes and/or subtrees of the

tree-structured documents are arranged being placed in the multiplexed stream according to the inter-document priorities presented by said inter-document priority presentation means with respect to the tree-structured documents containing the nodes and/or subtrees; [Piotrowski, paragraphs [0007]-[0008]] and

- transmitting means of transmitting said multiplexed stream by converting said multiplexed stream on the basis of a predetermined network protocol"

[Piotrowski, paragraph [0015] with Piotrowski, Fig. 1].

Piotrowski discloses the above limitations but does not expressly teach:

- "...tree-structured document storage means
- ...a plurality of...each assigned processing of one tree-structured document in a plurality of tree-structured documents to be transmitted
- ...multiplexed
- ...inter-document priority presentation means of presenting inter-document priorities set as transmission priorities with respect to the plurality of tree-structured documents to be transmitted;

With respect to Claim 16, an analogous art, Miller, teaches:

- "...tree-structured document storage means" [Miller, col. 6, lines 60-67].

With respect to Claim 16, an analogous art, Gutle, teaches:

- "...multiplexed [Gutle, col. 2, lines 10-30].

With respect to Claim 16, an analogous art, Sumita, teaches:

- "...inter-document priority presentation means of presenting inter-document priorities set as transmission priorities with respect to the plurality of tree-

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structured documents to be transmitted" [Sumita, cols. 21-22, lines 65-6 with Piotrowski, paragraph [0019]].

With respect to Claim 16 case law teaches:

- "...a plurality of...each assigned processing of one tree-structured document in a plurality of tree-structured documents to be transmitted [*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)].

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Miller, Sumita and Gutle with Piotrowski because the inventions are directed towards storing and transmitting files.

Miller, Sumita and Gutle's inventions would have been expected to successfully work well with Piotrowski's invention because the inventions use storage areas and transmit files. Piotrowski discloses a method and apparatus for structured streaming of an XML document comprising storage devices, however Piotrowski does not expressly disclose that the storage devices are tree-structured, presenting inter-document priorities, and transferring using multiplexing/demultiplexing. Miller discloses a method and apparatus for automatically organizing information comprising storage areas and a storage manager that files documents into appropriate folders and/or storage areas. Sumita discloses a document detection system with improved document detection efficiency comprising displaying documents according to priority. Gutle discloses a method and apparatus for the distribution of multi-media documents comprising multiplexing and demultiplexing a stream of data.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the folders/files from Miller, the multiplexing/demultiplexing from Gutle, and the presenting inter-document priorities from Sumita and install it into the invention of Piotrowski, thereby offering the obvious advantage of having an organized way of storing items on the storage device, sending multiple things through a stream of data (increasing the speed), and displaying relevant documents first according to their priority.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Piotrowski such that Piotrowski has a plurality of document-by-document encoding and decoding means each assigned processing of one tree-structured document in a plurality of tree-structured documents to be transmitted since it has been held that a duplication of parts with function (*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)) is obvious. In this case it is obvious because it would increase the speed of the Piotrowski so Piotrowski's invention does more than one document at a time.

35. **Claim 17** can be mapped to Piotrowski (as modified by Miller, Sumita and Gutle) as follows: "The tree-structured document transmitting apparatus according to claim 16, wherein said document-by-document encoding means further includes:

- descendant substitute display information storage means of storing descendant substitute display information for substitute display on said display means of said tree-structured document receiving apparatus for descendant nodes with respect

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to a node and/or a subtree existing as a parent of the descendant node;

[Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]] and

- descendant substitute display information addition means of making the node stream generation means generate as said node stream a stream in which the descendant substitute display information read out from said descendant substitute display information storage means is added immediately after the node and/or subtree existing as a parent of the descendant node" [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]].

36. **Claim 18** can be mapped to Piotrowski (as modified by Miller, Sumita and Gütle) as follows: "The tree-structured document transmitting apparatus according to claim 16, wherein the multiplexed stream generation means of said tree-structured document transmitting apparatus further has node priority setting means of determining the importance of an information portion to be presented from each node to the receiving-side user on the basis of a content of the node, an attribute of the node, a content of the document, an attribute of the document, the tree structure, and/or a user instruction, and setting a node priority on the basis of the determination, [Piotrowski paragraph [0019]] and

- wherein, in the multiplexed stream generation means of said tree-structured document transmitting apparatus, said node priority presentation means presents the node priority set by said node priority setting means" [Piotrowski paragraph [0019]].

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37. **Claim 19** can be mapped to Piotrowski (as modified by Miller, Sumita and Gutle) as follows: "The tree-structured document transmitting apparatus according to claim 16, further having inter-document priority setting means of setting inter-document priorities on the basis of the contents of the documents, the attributes of the documents, the degrees of relation with a search word relating to a search request from the receiving-side user, a user instruction from a transmitting-side user, and/or a user instruction from the receiving-side user, [Sumita, cols. 21-22, lines 65-6 with Piotrowski, paragraph [0019]]]

- wherein said inter-document priority presentation means presents the inter-document priorities set by said inter-document priority setting means" [Sumita, cols. 21-22, lines 65-6 with Piotrowski, paragraph [0019]]].

38. **Claims 27-31 and 38-41** encompass substantially the same scope of the invention as that of Claims 5-9 and 16-19, respectfully, in addition to a method and some steps for performing the system means of Claims 5-9 and 16-19, respectfully. Therefore, Claims 27-31 and 38-41 are rejected for the same reasons as stated above with respect to Claims 5-9 and 16-19, respectfully.

39. Claims 20-22 and 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0236903 (Piotrowski) in view of U.S. Patent No. 5,790,937 (Gutle), further in view of U.S. Patent No. 5,907,841 (Sumita).

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40. For **Claim 20**, Piotrowski teaches: "A tree-structured document receiving apparatus which receives a signal formed by converting on the basis of a predetermined network protocol [Piotrowski, paragraph [0022] with Piotrowski, paragraph [0015] with Piotrowski, Fig. 1] a ... stream formed in such a manner that a node priority is set with respect to each of nodes [Piotrowski, paragraph [0019] with Piotrowski, paragraph [0017] with Piotrowski, paragraph [0022]] of a tree-structured document on the basis of the importance of an information portion to be presented from the node to a receiving-side user [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0007]-[0008] with Piotrowski, paragraph [0025]] while satisfying two conditions: a first condition that the node priority of the node is equal to or lower than that of a node which is an ancestor of that node, [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] and a second condition that if a plurality of nodes of the same priority exist, the nodes necessarily constitute one subtree; [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] node streams are formed [Piotrowski, paragraph [0022]] in each of which, with respect to one of a plurality of tree-structured documents to be presently transmitted, nodes and/or subtrees are arranged in a sequence on the basis of the node priorities related to the tree-structured document; [Piotrowski, paragraphs [0007]-[0008]] and the multiplexed stream is formed by multiplexing the node streams relating to the tree-structured documents to be presently transmitted, sequences in which the nodes and/or subtrees of the tree-structured documents are arranged being placed in the multiplexed stream according to ... set with respect to the tree-structured



documents containing the nodes and/or subtrees, [Piotrowski, paragraphs [0007]-[0008]] said tree-structured document receiving apparatus having:

- receiving means of restoring the multiplexed stream from the signal received by the predetermined network protocol; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]]
- demultiplexing means of demultiplexing the multiplexed stream into the plurality of node streams contained in the multiplexed stream;
- ...document-by-document decoding means [Piotrowski, paragraphs [0015] with Piotrowski, paragraphs [0023]-[0025]]..., and each including extraction means and reconstruction means, said extraction means extracting the nodes and/or subtrees from said processing-assigned node stream according to the sequence of arrangement in the node stream, said reconstruction means adding the nodes and/or subtree in the extraction order to the tree-structured document under reconstruction; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and
- display means of displaying the tree-structured document under reconstruction in each document-by-document decoding means, the tree structure being displayed in the current reconstructed state at a corresponding position" [Piotrowski, paragraph [0025] with Piotrowski, paragraph [0009]].

Piotrowski discloses the above limitations but does not expressly teach:

- "...multiplexed
- ...inter-document priorities

- ...demultiplexing means of demultiplexing the multiplexed stream into the plurality of node streams contained in the multiplexed stream;
- a plurality of ...each assigned processing of one node stream in the plurality of node streams demultiplexed by said demultiplexing means”

With respect to Claim 20, an analogous art, Gutle, teaches:

- “...multiplexed [Gutle, col. 2, lines 10-30]
- ...demultiplexing means of demultiplexing the multiplexed stream into the plurality of node streams contained in the multiplexed stream,” [Gutle, col. 2, lines 10-30].

With respect to Claim 20, an analogous art, Sumita, teaches:

- “...inter-document priorities” [Sumita, cols. 21-22, lines 65-6 with Piotrowski, paragraph [0019]].

With respect to Claim 20 case law teaches:

- “...a plurality of ...each assigned processing of one node stream in the plurality of node streams demultiplexed by said demultiplexing means” [*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)].

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Sumita and Gutle with Piotrowski because the inventions are directed towards storing and transmitting files.

Sumita and Gutle’s inventions would have been expected to successfully work well with Piotrowski’s invention because the inventions use storage areas and transmit files. Piotrowski discloses a method and apparatus for structured streaming of an XML

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document comprising storage devices, however Piotrowski does not expressly disclose that the storage devices are tree-structured, presenting inter-document priorities, and transferring using multiplexing/demultiplexing. Sumita discloses a document detection system with improved document detection efficiency comprising displaying documents according to priority. Gutle discloses a method and apparatus for the distribution of multi-media documents comprising multiplexing and demultiplexing a stream of data.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the multiplexing/demultiplexing from Gutle, and the presenting inter-document priorities from Sumita and install it into the invention of Piotrowski, thereby offering the obvious advantage of sending multiple things through a stream of data (increasing the speed), and displaying relevant documents first according to their priority.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Piotrowski such that Piotrowski has a plurality of document-by-document encoding and decoding means each assigned processing of one tree-structured document in a plurality of tree-structured documents to be transmitted since it has been held that a duplication of parts with function (*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)) is obvious. In this case it is obvious because it would increase the speed of the Piotrowski so Piotrowski's invention does more than one document at a time.

41. **Claim 21** can be mapped to Piotrowski (as modified by Sumita and Gutle) as follows: "The tree-structured document receiving apparatus according to claim 20,

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wherein, in the node stream, descendant substitute display information for substitute display on said display means for descendant nodes with respect to a node and/or a subtree existing as a parent of the descendant node is added immediately after the node and/or subtree existing as a parent of the descendant node; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]]

- said extraction means in said document-by-document decoding means extracts the nodes and/or subtrees and the descendant substitute display information from the node stream according to the sequence of arrangement in the node stream; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and
- said reconstruction means in said document-by-document decoding means adds a substitute structure portion relating to the descendant substitute display information to the tree structure under reconstruction in place of the descendant node relating to the descendant substitute display information when said extraction means extracts the descendant substitute display information” [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0009]].

42. **Claim 22** can be mapped to Piotrowski (as modified by Sumita and Gutle) as follows: “The tree-structured document receiving apparatus according to claim 21, wherein said reconstruction means in said document-by-document decoding means immediately replaces the substitute tree-structured portion relating to the descendant substitute display information in the tree structure under reconstruction with the

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descendant node when said extraction means extracts the descendant node while substitute display for the descendant node according to the descendant substitute display information is being performed" [Piotrowski, paragraph [0009] with Piotrowski, paragraph [0025]].

43. **Claims 42-44** encompass substantially the same scope of the invention as that of Claims 20-22, respectfully, in addition to a method and some steps for performing the system means of Claims 20-22, respectfully. Therefore, Claims 42-44 are rejected for the same reasons as stated above with respect to Claims 20-22, respectfully.

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**Conclusion**


44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is advised that, although not used in the rejections above, prior art cited on the PTO-892 form and not relied upon is considered materially relevant to the applicant's claimed invention and/or portions of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent S. Stace whose telephone number is 571-272-8372 and fax number is 571-273-8372. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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